

Mastersproject within protein technology

Development of Biomarkers for the Detection of Pulmonary Fibrosis

As the number of smokers and pollution is increasing worldwide, especially in the third world, the consequences of pulmonary-related diseases in society are becoming increasingly problematic. Pulmonary diseases include Chronic Obstructive Pulmonary Disease (COPD) and Idiopathic Pulmonary Fibrosis (IPF) that kills millions every year.

The Project

The vision of the project is to become involved in the development of non-invasive biomarkers for diagnosis and prognosis for patients with IPF or COPD, at Nordic Bioscience. The idea is to identify diseased-related post translational modifications (PTMs) of proteins that are known to be involved in the pathology of pulmonary fibrosis and utilize these for the development of novel biochemical markers.

The benefit of having specific and sensitive markers for pulmonary fibrosis will be a better diagnosis of patients and early evaluation in drug development.

Nordic Bioscience already posses a portfolio of interesting lung biomarker but are interesting in developing new and more specific biomarkers, especially towards COPD and IPF

The main objectives in the project are:

- Assay development on antibodies developed against extracellular matrix fragments in the lung
- Target identification of antibodies by immunoprecipitation and affinity purification.

Methods

During the project you will learn techniques such as: ELISA, cell culturing, antibody purification, labeling of antibodies, immunoprecipitation, affinity purification, SDS-PAGE and Western blot.

Company profile

Nordic Bioscience is a biotech company with a strong focus on developing novel biochemical markers for diagnosis and prognosis of major human diseases. Nordic Bioscience measures limited samples with a carefully selected marker panel of tissue turnover to identify patients with disease progression or who responds best to treatment compared to traditional technologies. With more than 200 publications Nordic Bioscience proves its track record in biomarker science. English is used at all meetings. As master student you might get the opportunity for co-authorship on publications related to the thesis project.

Contact

If you are interested please send an application and CV to supervisor Jacob Hull Kristensen, Industrial PhD student at DTU and Nordic Bioscience jhk@nordicbioscience.com or +45 44 54 77 45